Load Diagrams
Program 0170 Rubber Buffers
**Calculation Example**

1. Calculation of energy per buffer: \( W = \frac{1}{2} m \times v^2 \)
2. Readout compression length from the diagram
3. Readout final load of the buffer from the table
4. Result and verification
   - \( s < 0.5 \times h \)
   - \( F < F_{\text{max}} \) of the crane structure
   - \( a = \frac{v^2}{2s} < a_{\text{max}} \)

\( W \) = Energy Absorption [J]  
\( s \) = Travel [mm]  
\( F \) = Force [kN]  
\( v \) = Velocity [m/s]  
\( m \) = Mass [kg]  
\( h \) = Buffer height  
\( a \) = deceleration

- Max. deflection = 50%
- Valid for solid-rubber buffers with \( h = 0.8 \times d \)
Energy-Travel Ø 125

Force-Travel Ø 125
Energy-Travel Ø 160

Force-Travel Ø 160
Energy-Travel Ø 250

Suspension travel [%] vs. Energy W [J]

Force-Travel Ø 250

Suspension travel [%] vs. Force F [kN]
Energy-Travel Ø 315

Force-Travel Ø 315
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